# Agrotechnical cultivation of sesame "Tashkent-122" in light gray light soils in Kashkadarya region

Sh.E.Akhmedov<sup>1</sup>, O. Kurbanova<sup>2</sup>, E. Rakhmatov<sup>3</sup>

#### **ABSTRACT**

This article proves that the amount of nutrients in the soil obtained at the end of the sesame period of growth was slightly reduced by the beginning of the growing season under the influence of agrotechnical measures.

It was found that plant intake of sesame seeds "Tashkent-122" in water and mineral fertilizer soil by 65% -75-65% compared to ChDNS in the range of 2.5 million seeds was 1-1-0, 2000 m3 / s. and fertilizers N-180, R-100, K-50 kg / ha.

The main purpose of the research is to determine the optimal thickness of sesame seeds "Tashkent-122" in the light gray soils of the Karshi steppe.

**Keywords:** Nice, experience, fruits, soil, research, fertilizer, "Tashkent-122" variety.

#### 1. INTRODUCTION

Since ancient times (7000 years ago), seeds of sesame seeds grown in India, Pakistan, Central Asia, China, the Mediterranean were used not only as seasoning but also as a raw material for popular production. The healing and cosmetic properties of sesame oil (for example, information on the healing power of sesame seeds is found in the Avicenna healing treatments, and in ancient Egypt sesame oil was widely used in folk medicine at the beginning of 1500 BC). Another name for Susan is "sesame", which is translated from the Assyrian language as "greasy plant" (sesame oil contains up to 60% of the value of sesame oil)

With many useful properties, sesame oil is now widely used in traditional medicine and home cosmetology, used in pharmaceuticals and bakeries, in the confectionery, canning and perfumery industries, as well as in the production of solid fats and oils.

Sesame oil is obtained from sesame seeds by cold press. Unrefined oil from roasted sesame seeds has a specific dark brown color, rich sweet-nutritious taste and strong aroma (unlike the sesame seeds of light yellow sesame oil). low taste and odor).

An aromatic, nutrient-rich, sesame oil has long been used as a traditional ingredient in Indian, Japanese, Korean, Chinese and Thai cuisine (note that before the peanut butter appeared sesame seed oil most commonly used for baking.) Sesame oil, which combines well with honey and soy sauce, is often used in Asian exotic dishes. It is used for cooking meat, vegetables marinade, meat and vegetable salads.

Without the scientific basis of farming, it is impossible to provide the national economy with raw materials, humanity with food and livestock feed. For the development of the agricultural sector in recent years a lot of funds and technical resources have been allocated, new scientific bases of management and management of the farm have been created. Significant progress has been made since agrarian enterprises have been allowed to start self-financing, self-sufficiency and planning from below, and people are earning more for their work. Existing conditions for the expansion of agriculture and livestock production are increasing, which results in better land, fertilizer, water and other opportunities. The farms have an

<sup>&</sup>lt;sup>1</sup> Phd, Candidate of agricultural sciences, Karshi engineering-economics institute, Uzbekistan

<sup>&</sup>lt;sup>2</sup>Assistant of the department of technology of storage, primary processing of agricultural products, Karshi engineering-economics institute, Uzbekistan

<sup>&</sup>lt;sup>3</sup>Assistant of the Department of Chemistry, Karshi engineering-economics institute, Uzbekistan Email: akhmedov\_sh@umail.uz

opportunity to create new crop-based crop breeding facilities and increase their feed capacity for livestock productivity.

The main task of the agro-industrial sector is to increase the productivity of food crops by 1.5-2 times to provide the population with food, clothing and health care, to introduce new techniques for the maintenance of crops, and to introduce environmentally friendly technologies.

Optimal watering, planting standards and thickness of seedlings for sowing of sesame seeds "Tashkent-122" in the light-gray soils of the region have not been developed.

Although Tashkent-122 varieties have been expanding in Kashkadarya's soil and climatic conditions for 1,915 hectares in recent years, its demand for high-yield science-based agrotechnologies such as water, fertilizer, planting standards, and planting has not been studied. Therefore, researching this issue on a scientific basis and the search for optimal care technologies determine the scientific novelty of the research.

Cottonwood "Tashkent-122" is fed N-180, R-100, K-50 kg / ha and soil moisture content is 65-75-65% against ChDNS, 1-1-0, 200 m<sup>3</sup> in 1 sec. The volume of water used for this option is 990 kg, the yield increases by 1 cent.

#### 2. METHODS AND SYSTEMS OF EXPERIMENTATION

Field experiments were conducted on the Jasurbek Pulatovich farm in Nishan district of Kashkadarya region. The soil of the experimental field is located at a depth of 2.5-3.0 m. In 2018, Kashkadarya region selected the sesame-based sesame "Tashkent-122". The experimental options area is 5000 m<sup>2</sup> (1388 x 3.6) with a total area of 0.50 hectares. Field soils are not saline. Experimental planting options are located in the same position as the water rates,

The standard for Versus ChDNS fertilizer Annual ap. sowing, (mln./kg) soil moisture,% average, kg Planting time is May 15-20 1,5 mln. (5 kg) 2,0 mln. (6 kg) N-180, P-100, K-50 65-75-65 2,5 mln. (7 kg) 3,0 mln. (8 kg) Planting time is June 10-15 1,5 mln. (5 kg) 2,0 mln. (6 kg) N-180, P-100, K-50 65-75-65 2,5 mln. (7 kg) 3,0 mln. (8 kg)

Table 1. Experimental system

Fertilizer application rates: 100 kg of phosphorus per hectare, 70% of phosphorus fertilizers and 50% potassium fertilizers per 50 kg of potassium, the other 30% are used in the sesame flowering phase, 50% in the sesame phase of sesame.

Annual rates of nitrogen fertilizers at 180 kg have been imposed in the following periods: 2-3 kg of maple-making 50 kg / ha; 50 kg / ha during the shale phase and 80 kg / ha during flowering.

Research activities such as experimentation, sesame growth and development, phenological observations, irrigation order and rates, fertilizer rates, productivity, and other computations are published in PSUEAITI. The methodology was carried out in accordance with the methodical instructions «Methods of field experiments with cotton» (SoyuzNIXI, 1981 g) and «Field experiments» (2007).

The following research works were performed in the experimental field:

The following tasks were implemented to carry out the research:

- development of optimal standards and timing of sesame seeds "Tashkent-122";
- Determination of thickness of saplings, providing high yield of sesame "Tashkent-122" in light gray soils;
- ♣ Scientific substantiation of the requirement of sesame seeds "Tashkent-122" for mineral
- Determine the degree of irrigation and leaf fertilization in the ripening phase and the thickness of the fertilizer:

- calculate cultivation of sesame seeds "Tashkent-122" in the experimental field, development of variants and reproducibility, taking into account biological characteristics of crop;
- ♣ The scientific study of the influence of soil moisture, mineral fertilizers and irrigation rates on the growth, development, yield and technological quality of grain.
- Soil samples were collected at the beginning and end of the life cycle and total amount of nitrogen and phosphorus by modification TsINAO was determined by I.Turin method by I.M. Maltzeva and Gretsenko method, by the photorimimeter method of nitrate nitrogen B.P. Machigin was determined by P.V Protasov method of substituting potassium. The obtained data were mathematically analyzed by BA Dospexov.

**Technology of sesame seeds.** Oilseeds include flaxseed, sesame, canonut, peanuts, sunflower, oilseed rape and other herbs used in many areas of food, medicine, technology and industry. However, the area under cultivation in the Republic is still low, and oil production is practically industrial. The technology of cultivation of flax, sesame and peanut from the most cultivated group in this group.

Sesame is the most popular among oilseeds and contains 50 to 60 percent fat. Cold sesame oil has a wonderful flavor and aromatic flavor. If you produce sesame oil evenly, you will get a quality lunch in the industry, partly from the bottom.

Sesame seeds are used for baking candies and halva in baking, and the last remaining heat from sesame seeds is used as a feed for the feeding of sheep and cattle in the highest feed unit, which has 132 kg of feed per 100 kg. Kunjut is the oldest plant in Asia and Africa, and is grown mainly in India, China and BTC countries.

The sesame does not plant much of us in the country. It is mainly planted in Uzbekistan, Tajikistan and Turkmenistan, and if not irrigated it can produce 10-12 centners, and if irrigated it can produce 18-20 centners per hectare.

### Biological features of sesame seeds

Sesame is a perennial herb. He belongs to the Sunflower family. The root of the sesame is an arrow root, penetrating the soil to a depth of one meter. Stem height is 1.2-1.5 meters and the body is covered with fine hairs

The flower is five-lined, with 1-2 leaves under the stem. The flower in the short flower band is white, red and poppy. Flower can pollinate itself and from the outside.

The fruit consists of two or four fruit leaves in a long shovel type. One plant contains about 100-150 beans, sesame sprouts are ripped and 70-30 seeds.

Seed - small, white, gray, brown and black, weighing 1000 seeds weighs 3-5 grams.

Sesame - light, warm, well-developed in short day. Sesame seeds germinate at  $15-16\,^{\circ}$  C and die at  $0.5-1\,^{\circ}$  C without frost. Growing sesame stops at  $12-18\,^{\circ}$  C. An alternative temperature is  $25-30\,^{\circ}$  C for a good growth of sesame. This plant is very demanding for moisture and heat. Due to the high demand for sesame fertilizer, it is well developed on black soils, sandy and sandy soils. Sesame grows slowly in the early days of sprouting. It grows very quickly during flowering. Depending on the sesame seeds, the development period is from 90 to 120 days.

**Sesama agrotechnics.** To get a good sesame seeds, you need to fill in with full nutrients - nitrogen 90, phosphorus 90, potassium 90 kg / g and 10 tons of local fertilizer. If planted with 100 kg of superphosphate per hectare, it will be very effective.

This plant receives nutrients very slowly, but during the growing season and later during the growing season, the demand for nutrients increases. Therefore, it is necessary to feed it occasionally from the RCR at any given time.

**Agrotechnical measures for sesame care.** After that, the top of the ground was flattened and 90 cm wide. The pink is watered and the top part is ready for planting. The seeds of sesame seeds Tashkent-122 were sown on May 15-20, 2018 at a depth of 2-3 cm.

## 3. CONCLUSIONS AND SUGGESTIONS

According to the results of the study in the light gray soils of the Karshi steppe, the following conclusions were reached:

According to the study, at the beginning of the growing season, the soil weight was 1.30 in the plowing layer (0-30 cm), in the submerged (30-50 cm) layers, 1.38, 0-70 and 0-100

cm, respectively. , 34-1.35~g / cm³, by the end of the breeding period, were found to be 1.34-1.35~g / cm³ and 1.37-1.38~g / cm³, respectively, or growth period. density of 0.03~g / cm3 compared to the beginning.

In spring, soil permeability is 321.2 on the first hour, 187.6 in the second hour, and further decrease in the following hours - 163.0, 138.3, 123.2, 99.9 m3 / ha, total 1033.2 m3 / ha, by the end of the growing season, irrigation resulted in a drastic reduction of soil water permeability as a result of inter-row cultivation of 647.9-698.7 m³ / ha.

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